

**What is claimed is:**

1. A molding die comprising:

- (a) a shell having a penetration hole, said penetration hole having a lower opening and an upper opening,
- (b) a lower pattern inserted and disposed in the lower opening of the shell, and
- (c) an upper pattern slidably disposed from the upper opening of the shell,

wherein said shell includes an outer shell and an inner shell disposed inside of the outer shell,

said inner shell is composed of a plurality of split shells, the inner shell is separable from the outer shell, and said inner shell, lower pattern, and upper pattern form a cavity.

2. The molding die of claim 1,

wherein said outer shell has a second penetration hole, said inner shell is disposed in the second penetration hole, and

said inner shell is composed of two split shells having a first split shell and a second split shell.

3. The molding die of claim 2,

wherein said inner shell is disposed detachably from the second penetration hole of the outer shell.

4. The molding die of claim 1,

wherein said outer shell is formed of one die material not having junction.

5. The molding die of claim 1,

wherein said shell further includes a spacer disposed between the outer shell and inner shell.

6. The molding die of claim 5,

wherein said spacer has a larger coefficient of thermal expansion than the outer shell and inner shell.

7. The molding die of claim 6,

wherein said inner shell has a nearly same coefficient of thermal expansion as the outer shell.

8. The molding die of claim 1,

wherein said cavity is filled with at least one material selected from the group consisting of glass, ceramics, and inorganic materials.

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9. The molding die of claim 1,

wherein said cavity has a shape for obtaining an optical fiber aligning array, and

the optical fiber aligning array has plural V-grooves formed on the upper surface of a rectangular glass molded body.

~~10.~~ A manufacturing method of molded product comprising the steps of:

(a) combining an inner shell in an outer shell having a second penetration hole, and obtaining a shell having a penetration hole, said inner shell having plural split shells, and said penetration hole surrounded by the plural split shells,

(b) disposing a lower opening of the penetration hole of the shell to a lower pattern

(c) placing a molding material in a cavity surrounded by the penetration hole and lower pattern,

(d) forming a molded product by inserting an upper pattern into the cavity from an upper opening of the penetration hole of the shell, and pressurizing the molding material while heating the molding material,

(e) separating the upper pattern and outer shell from the inner shell and lower pattern, after the molded product

formed by pressurizing is solidified, and

(f) taking out the molded product by separating the plural split shells after step (e).

11. The manufacturing method of molded product of claim 10,

wherein said plural split shells are a pair of split shells composed of a first split shell and a second split shell, and

said first split shell and second split shell are separatable parallel in the direction of the penetration hole.

12. The manufacturing method of molded product of claim 10,

wherein said outer shell is formed of one die material not having junction.

13. The manufacturing method of molded product of claim 10,

wherein when the molding material is heated and pressurized at step (d), the molding material is softened, and the pressure is transmitted to the inner shell and outer shell through the softened molding material, so that the inner shell is fixed to the outer shell.

14. The manufacturing method of molded product of claim 10,

wherein said shell further includes a spacer, and

said step (a) includes a step of assembling the shell by interposing the spacer between the outer shell and inner shell.

15. The manufacturing method of molded product of claim 14,

wherein said spacer has a larger coefficient of thermal expansion than the outer shell and inner shell.

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